

REMARKS**Summary of the Office Action**

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wook (US 5,894,136) in view of Noguchi (US 6,461,901).

Claims 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wook in view of Noguchi and Kim (US 6,355,956).

Summary of the Response to the Office Action

Applicant has amended claim 1 to further define the invention, and canceled claim 15. Accordingly, claims 1-14 are pending for further consideration.

All Claims Define Allowable Subject Matter

Claims 1-10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wook (US 5,894,136) in view of Noguchi (US 6,461,901), and claims 12-15 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Wook in view of Noguchi and Kim (US 6,355,956). Applicant respectfully traverses these rejections as being based upon references that neither teach nor suggest the novel combination of features recited in amended independent claim 1, and hence dependent claims 2-14.

Independent claim 1, as amended, recites, an array substrate for a liquid crystal display device including “a metal layer formed on an entire surface of each of the data lines and at peripheral portions of the drain electrode.” In contrast to Applicant’s claimed invention, Wook merely teaches (col. 4, lines 27-31) forming a drain electrode from chromium (Cr) along an entire surface of an N⁺-type amorphous silicon layer 8. Accordingly, Applicant respectfully asserts that Wook is completely silent with respect to a metal layer formed on an entire surface of each of the data lines and “at peripheral portions of the drain electrode,” as recited by

amended independent claim 1, and hence dependent claims 2-14.

With regard to the rejection of claims 12-15 under 35 U.S.C. § 103(a) as being unpatentable over Wook in view of Noguchi and Kim, Applicant respectfully submits that Kim fails to teach or suggest a metal layer formed on an entire surface of each of the data lines and “at peripheral portions of the drain electrode,” as recited by amended independent claim 1, and hence dependent claims 2-14. Specifically, Applicant respectfully asserts that the Office Action previously concluded that it would have obvious to “modify the drain electrode of Wook by forming it of the same material as the pixel electrode as taught by Noguchi to simplify the manufacturing process.” Thus, the Office Action asserts that modifying the drain electrode of Wook with the teachings of Noguchi would result in drain and pixel electrodes formed of the same material (ITO). Now, the Office Action alleges that “Wook shows (fig. 6F) that the metal layer (9) is formed at peripheral portions of the plurality of pixel electrodes and at peripheral portions of the drain electrode.” Applicant strongly disagrees.

First, Applicant respectfully asserts that the Office Action directly contradicts itself with respect to the combined teachings of Wook and Noguchi. For example, with regard to the rejection of claims 1-10 under 35 U.S.C. § 103(a) in view of Wook (US 5,894,136) Noguchi, the Office Action alleges that the drain and pixel electrodes may be formed of the same material (ITO). However, with regard to the rejection of claims 12-15 under 35 U.S.C. § 103(a) in view of Wook, Noguchi, and Kim, the Office Action now alleges that the drain and pixel electrodes may include a metal layer (9) “formed at peripheral portions of the plurality of pixel electrodes and at peripheral portions of the drain electrode.” Accordingly, Applicant respectfully asserts that the Office Action is both arbitrarily and capriciously combining the teachings of Wook and Noguchi to allege a *prima facie* case of obviousness. In other words, first the Office Action

alleges that the drain and pixel electrodes may be made of the same material (ITO), and now alleges that the drain and pixel electrodes are made of the same material (i.e., a metal layer), which is a different material than originally alleged by the Office Action. However, this attempt at having things both ways in order to reject Applicant's claims clearly flies in the face of the fundamental principles of obviousness under 35 U.S.C. § 103.

Second, Applicant respectfully asserts that the metal layer 9, as shown by Wook is clearly not formed "at peripheral portions of the drain electrode," as recited by amended independent claim 1, and hence dependent claims 2-14. In fact, the metal layer 9 of Wook is formed across the entire surface of an N⁺-type amorphous silicon layer 8. Accordingly, Applicant respectfully asserts that the N⁺-type amorphous silicon layer 8 cannot be considered a drain electrode when Wook explicitly discloses that 9b is a drain electrode. Thus, Applicant respectfully asserts that even the broadest interpretation of Applicant's claims and the most open interpretation of Wook would not begin to lead one of ordinary skill in the art to arrive at Applicant's claimed invention.

Applicant further asserts that the Office Action does not rely on Kim to remedy the deficiencies of Wook and Noguchi, as detailed above. Moreover, Applicant respectfully asserts that Kim cannot remedy the deficiencies of Wook and Noguchi since Kim does not teach or suggest forming a metal layer "at peripheral portions of the drain electrode," as recited by amended independent claim 1, and hence dependent claims 2-14.

For at least the above reasons, Applicant respectfully submits that claims 1-14 are neither taught nor suggested by Wook, Noguchi, and/or Kim, whether taken alone or in combination. Thus, Applicant respectfully asserts that the rejections under 35 U.S.C. § 103(a) should be withdrawn because the above-discussed novel combination of features are neither taught nor suggested by any of the applied references.

CONCLUSION

In view of the foregoing, Applicant respectfully requests reconsideration and timely allowance of the pending claims. Should the Examiner believe that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicant's undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under 37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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Dated: November 12, 2004

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